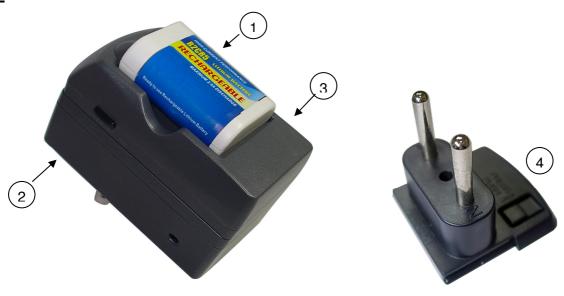


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DESCRIPTION	Rechargeable Lithium Battery (2CR5) & Worldwide Traveling Charger set	EDITION	0	PAGE	1/5

### 1. Image



- 1. Rechargeable Lithium Battery 2CR5,
- 2. Worldwide Traveling Charger Base,
- 3. Interchangeable Charger Plate

## 4. European Type Input Plug

## 2. Special Features

Structure : Assembled by Charger Base, Charger Plate, Multi-Input Plug &

Rechargeable 2CR5 Lithium Battery

Function : Constant Current and Constant Voltage Charging For Li-ion Battery

## 3. Ratings of Charger

INPUT : AC100~240V, 50~60Hz

OUTPUT : DC 3.6V / 7.3V (selectable for charger plate)

OPERATION CURRENT : 0.3A / 0.35A

OPERATION TEMPERATURE : 0-45 °C HUMIDITY : 45%-85%

# 4. Physical characteristics

Charger base normal size (for reference only): L 80.15 mm x W 48.2.00 mm x H 27.90 mm



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## 5. Electrical characteristics of Charger

5.1 Output voltage without load : 0-3.6V / 0-7.4V

5.2 Stop for charging : Charging current less than 40mA

5.3 Ripple voltage : 100mV 5.4 Efficiency : 70%

5.5 Power factor : Lager than 0.5

5.6 Maximum temperature of casing after 2 hours of : ≤40 °C

continuous loading of 1A charge

## 6. Mechanical test of Charger

## **6.1 Vibration Test**

The charger was vibrated in bi-axial direction with 4mm amplitude of 1000 cycles/minute for 60 minutes in each direction, the charger is observed to be normal.

#### 6.2 Drop Test

The charger was dropped down from the vertical height of 1m onto a flat firm nonyielding surface by a placing downward three times. The charger is observed to be normal.

### 7. Precaution and handling

- 7.1 The battery to be charged must match charger model.
- 7.2 If submerged in water. The circuit may be damaged.
- 7.3 Do not externally short the outline terminal.
- 7.4 Do not use charger nearby fire, stove or overheat.
- 7.5 Do not use AC power adaptor other than specified by manufacture.

## 8. Operation Instructions for Charger Set

- 7.1 Plug the charger in a wall outlet.
- 7.2 The LED show flashing Green when the charger is ready.
- 7.3 Insert battery pack into the charger and LED indicator turns Red when charging.
- 7.4 When the battery pack is fully charged, the LED indicator flashing Green.
- 7.5 After fully charged the battery pack, unplug the charger from power outlet and remove the battery pack from the charger battery compartment.



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### 9. Ratings of Battery

9.1 Cell

9.1.1 Type of Cell : Sealed Lithium-ion Prismatic Rechargeable battery

9.1.2 Cell Model : IFR16340A40

9.1.3 Cell Size : 16340 9.1.4 Cell Minimum capacity : 400 mAh 9.1.5 Number of cell used : 2PC

9.2 Pack

9.2.1 Rated voltage : 6.0V

9.2.2 Typical capacity : 400 mAh

9.2.3 Minimum capacity : 350 mAh (0.5C charging & discharging)

9.2.4 Standard charge :  $200 \text{ mA x 5hrs to } 3.6\text{V} \pm 0.1\text{V}$ 

9.2.5 Rapid charge. : 400 mA x 2.5hrs to 3.6V±0.1V

9.2.6 Discharge end voltage : 4.0V

9.2.7 Maximum charge current : 400 mA

9.2.8 Maximum discharge current : 2500mA

9.2.9 Replace No. : 2CR5

9.2.10 Battery Pack Color : Dark Blue

9.2.11 Running time on Sony DCR-HC30 : Approx 192 Min

(LCD ON)

9.2.12 Running time on Sony DCR-HC30 : Approx 222 Min

(LCD ON)

9.2.13 Operating temperature : 0 - 45 °C (charge)

-20 - 60 °C (discharge)

9.2.14 Storage temperature : -20 - 45 °C



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# 10. Test conditions for Battery

Unless otherwise specified, all tests should be conducted within one month of delivery under the following conditions :

Ambient temperature :  $20 \pm 5$  °C. Relative humidity :  $65 \pm 20$ %.

# 11. Performance

Item	Criteria	Test conditions
Capacity	Above 350mAh	Standard charge and standard discharge
Internal impedance	Less than 300mohm	Measure AC impedance at 1kHz
Cycle life **	Above 280mAh	500 cycles charging/discharging is repeated in the below condition.  • Charging: 200mA to 4.0V  • Rest time: 20min  • Discharging: 350mA up to 4.0V  • Temperature: 20±2 ℃
Leakage resistance	No leakage	Visually inspect battery pack after standard charge and storage at 25 ℃ for 14 days.
Drop test	No fire, no explosion, no leakage (max. weight loss 0.1%)	Drop battery pack after standard charged onto a bakelife floor from a height of 1 m for 6 times.
Vibration test	No fire, no explosion, no leakage (max. weight loss 0.1%)	The battery pack is vibrated in triaxial direction with 4 mm amplitude of frequency 30 Hz (1 Hz per minute) for 1 minute in triaxial direction.
Short circuit test	No fire, no explosion, cell temperature shall not exceed 150 ℃	External short circuit
Dimensions	Refer to drawing of CR-P2	Measured by calipers
Battery weight	Approx. 72g	Measured by balance
Appearance	No crack, no leakage, no deformation	Visual inspection

Note: \*\* Data provided under "Cycle Life" in this document is our best estimate based on the technical data supplied by battery cell manufacturer in the Product Specification Form.



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#### 12. Warranty

One year limited warranty against workmanship and material defects. Manufacturer reserves the right to alter, amend the design, model and specification without prior notice.

## 13. Charge state of cell before shipment

Charge from 10% to 50% according to delivery condition.

### 14. Safety precaution

Please follow the safety precaution carefully as improper handling of lithium ion batteries may result in injury or damage from electrolyte leakage, heating ignition or explosion. To ensure safety, consult with us regarding the charge and discharge specifications, equipment structure, warning labels and other important details when designing equipment to use our rechargeable lithium ion batteries.

- ♦ Never charge the battery above 7.3V.
- Never reverse charge the battery.
- Never heat or incinerate the battery.
- ◆ Never pierce, crush or cause mechanical damage to the battery.
- Never charge a battery at high temperature condition, such as at or near a fire.
- ♦ Never short circuit the battery.
- ◆ Never discharge a battery to below 3.0V per cell.
- ♦ Never allow the battery to get wet or be immersed in water.
- ♦ For long period of storage, temperature should be below 45°C.
- ◆ After long period of storage, battery may required some cycling to recover capacity.